14822

LORAN-C OVERPRINTED

NOAA nautical charts are constructed to exacting standards and are designed to promote safe navigation. Since our waterways are subject to continual change, the National Ocean Service encourages chart users to submit corrections or comments for the improvement of this product to the Director, Charting and Geodetic Services (N/CG2), National Ocean Service, NOAA, Rockville, Maryland 20852. By working together, we can make our activities safer and more enjoyable.

Thomas J. Maginnis
Assistant Administrator for Ocean Services
and Coastal Zone Management

CAUTION
CHANGES in BUOYAGE

Mariners are advised that authorized aids to navigation are being changed to conform to maritime standards of the International Association of Lighthouse Authorities Maritime Buoyage System, Region B. Significant changes are: black port hand buoys to green since and white vertically striped buoys to red and white vertically striped buoys; and lateral lights from white to red or green as appropriate. Changes to aids to navigation will be announced in the Defense Mapping Agency Hydrographic/Topographic Center weekly Notice to Mariners and the U.S. Coast Guard Local Notice to Mariners.

Formerly LS 31, 1st Ed., 1980

SOUNDINGS IN FEET

National Chart Catalog No. 4, Panel 1

(LIONS CHART 14806)

L A K E O N T A R I O

NIAGARA BAR

ANCHORAGE PROHIBITED

ANCHORAGE AREA

WELLAND CANAL CHANNELS DREDGED TO 27 FEET

PORT WELLER

PORT DALHOUSIE

ST. CATHARINES

NIAGARA-ON-THE-LAKE

YOUNGSTOWN

LEWISTON

QUEENSTON

TUSCARORA INDIAN RESERVATION

NIAGARA FALLS

CHIPPAWA

NAVY ISLAND

GRAND ISLAND

NORTH TONAWANDA

TONAWANDA

KENMORE

BUFFALO

PORT COLBORNE

WELLAND

For more detail see Inset on Chart No. 14806

For more detail see Chart No. 14816

For more detail on the Welland Canal see Canadian Chart No. 2042

For more detail see Chart No. 14832

For more detail see Chart No. 14833

For more detail on the Welland Canal see Canadian Chart No. 2042

UNITED STATES - GREAT LAKES
LAKE ONTARIO-LAKE ERIE
NEW YORK
APPROACHES TO
NIAGARA RIVER AND WELLAND CANAL

Polyconic Projection
Scale 1:80,000
North American Datum of 1983
(World Geodetic System 1984)
SOUNDINGS IN FEET

NOTES

PLANE OF REFERENCE OF THIS CHART (Low Water Datum)
LAKE ERIE ..... 568.6 ft
LAKE ONTARIO ..... 242.8 ft

Referred to mean water level at Father Point (Pointe au Père), Quebec, International Great Lakes Datum (1955).

AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation. See Canadian List of Lights, Buoys and Fog Signals for information not included in the U.S. Coast Guard Light List.

SYMBOLS AND ABBREVIATIONS. For complete list of symbols and abbreviations see Chart No. 1.

BRIDGE AND OVERHEAD CABLE CLEARANCES. When the water surface is above Low Water Datum, bridge and overhead clearances are reduced correspondingly. For clearances see U.S. Coast Pilot 6.

AUTHORITIES. Hydrography and topography by the National Ocean Service, Charting and Geodetic Services with additional data from the Corps of Engineers, Geological Survey, U.S. Coast Guard, and Canadian authorities.

SAILING DIRECTIONS. Bearings of sailing courses are true and distances given thereon are in statute miles between points of departure.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 6. Additions or revisions to Chapter 2 are published in the Notices to Mariners, or information concerning the regulations may be obtained at the Office of the Commander, 9th Coast Guard District in Cleveland, Ohio, or at the Office of the District Engineer, Corps of Engineers in Buffalo, N.Y.

Refer to charted regulation section numbers.

Sailing courses and limits indicated in magenta are recommended by the Lake Carriers Association and the Dominion Marine Association.

CAUTION
POTABLE WATER INTAKE (PWI)

Vessels operating in fresh water lakes or rivers shall not discharge sewage, or ballast, or bilge water within such areas adjacent to domestic water intakes as are designated by the Surgeon General (21 CFR 1250.93). Consult U.S. Coast Pilot 6 for important supplemental information.

Pump-out facilities

For the St. Lawrence Seaway Regulations and Circulars, special equipment, radio frequencies used in Traffic Control and related information, refer to THE SEAWAY HANDBOOK.

Traffic Control calling-in point with number; arrow indicates direction of vessel movement.

POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

LAKE ONTARIO

Average levels (1918-1947)

Extreme Levels (period of record)

Low Water Datum, which is the plane of reference for the levels shown on the above hydrograph, is also the plane of reference for the charted depths. If the lake level is above or below Low Water Datum, the existing depths are correspondingly greater or lesser than the charted depths.

WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot 6 for details.

RACING BUOYS
Racing buoys within the limits of this chart are not shown thereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other privately maintained buoys are not all listed in the U.S. Coast Guard Light List.

CAUTION
Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged, particularly in the near shore areas. Mariners should proceed with caution.

CAUTION
Mariners are warned that numerous uncharted stakes and fishing structures, some submerged, may exist in the area of this chart. Such structures are not charted unless known to be permanent.

SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 6 for important supplemental information

RADAR REFLECTORS
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

CAUTION
Only marine radiobeacons have been certified for surface use. Limitations on the use of certain other radio signals on aids to marine navigation can be found in the U.S. Coast Guard Light Lists and Defense Mapping Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
(Accurate location) (Approximate location)

LAKE ERIE FISH NETTING AREAS

Various types of nets are employed in Lake Erie of which gill nets, impounding nets and trap nets may create a hazard to mariners. These are marked by buoys or stakes. This diagram shows the areas most intensively fished and the principal type of nets employed. However, fishing gear may be encountered at any location.

1. Principal Gill Netting Areas.
2. Impounding Net Areas.
3. Trap Net Areas.

Gas pipelines and wells contain natural gas under pressure and damage to these installations would create an immediate fire hazard. Vessels anchoring in Lake Erie should do so with caution after noting the underwater, and therefore concealed, positions of all oil and gas wells, pipelines, submerged cables and other installations.

LORAN-C
GENERAL EXPLANATION

LORAN-C FREQUENCY ..... 100(kHz)
PULSE REPETITION INTERVAL ..... 99,600 Microseconds
9960

STATION TYPE DESIGNATORS: (Not individual station letter designators)
M Master
W Secondary
X Secondary
Y Secondary
Z Secondary

EXAMPLE 9960-Y

RATES ON THIS CHART

9960-W 9960-Y 9960-Z

The Loran-C correction tables published by the Defense Mapping Agency or others should not be used with this chart. The lines of position shown have been computed based on survey data. Every effort has been made to meet the 2 nautical mile accuracy criteria established by U.S. Coast Guard. Mariners, however, are cautioned not to rely solely on the lattices in inshore waters.

LAKE ERIE

Average levels (1918-1947)

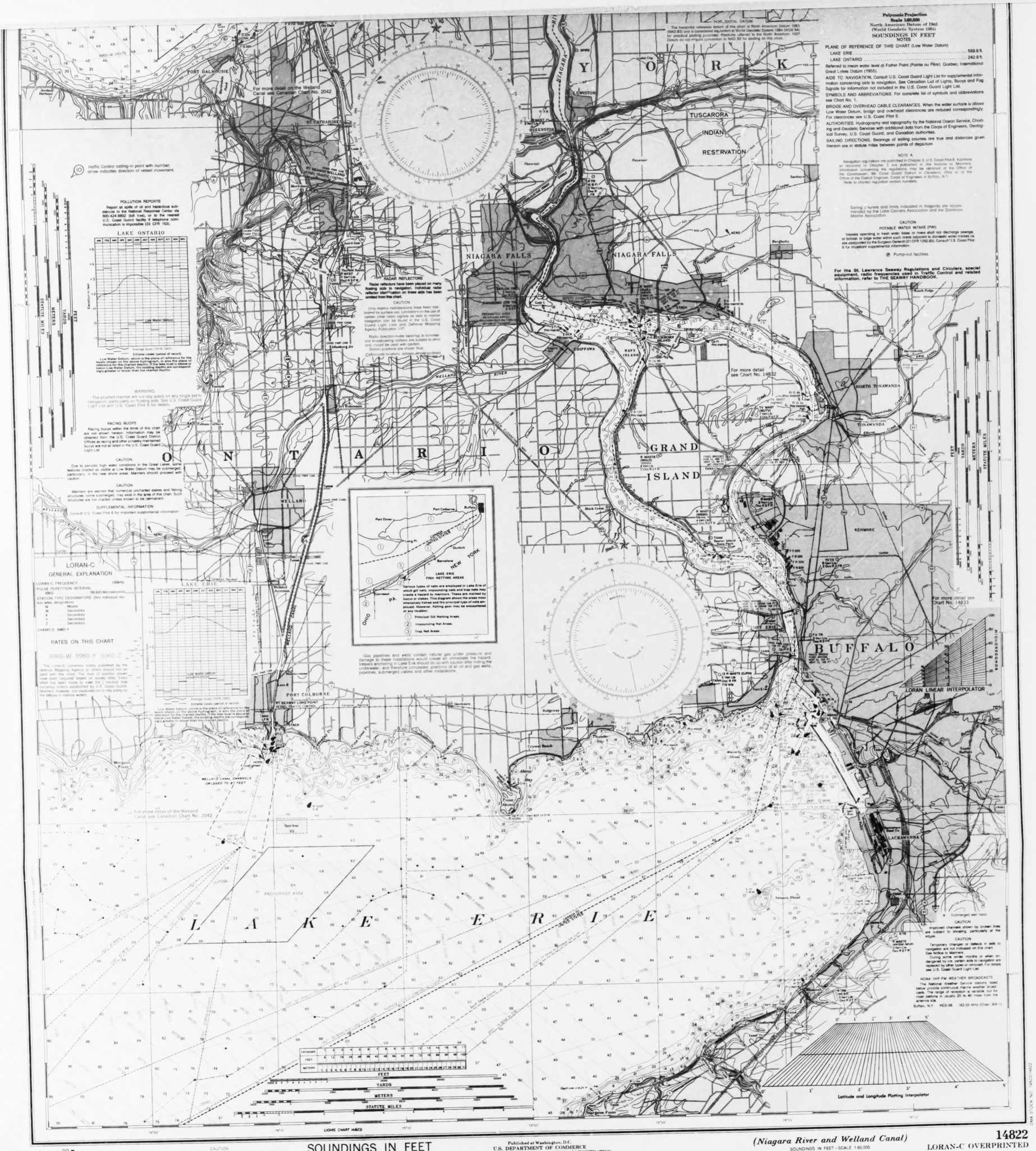
Extreme Levels (period of record)

Low Water Datum, which is the plane of reference for the levels shown on the above hydrograph, is also the plane of reference for the charted depths. If the lake level is above or below Low Water Datum, the existing depths are correspondingly greater or lesser than the charted depths.

LORAN LINEAR INTERPOLATOR

LORAN-C OVERPRINTED

14822


Polyconic Projection
Scale 1:80,000
North American Datum of 1983
(World Geodetic System 1984)
SOUNDINGS IN FEET
NOTES
PLANE OF REFERENCE OF THIS CHART (Low Water Datum)
LAKE ERIE ..... 568.6 ft.
LAKE ONTARIO ..... 242.8 ft.
Referred to mean water level at Father Point (Pointe au Père), Quebec, International Great Lakes Datum (1955).
AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation. See Canadian List of Lights, Buoys and Fog Signals for information not included in the U.S. Coast Guard Light List.
SYMBOLS AND ABBREVIATIONS. For complete list of symbols and abbreviations see Chart No. 1.
BRIDGE AND OVERHEAD CABLE CLEARANCES. When the water surface is above Low Water Datum, bridge and overhead clearances are reduced correspondingly. For clearances see U.S. Coast Pilot 6.
AUTHORITIES. Hydrography and topography by the National Ocean Service, Charting and Geodetic Services with additional data from the Corps of Engineers, Geological Survey, U.S. Coast Guard, and Canadian authorities.
SAILING DIRECTIONS. Bearings of sailing courses are true and distances given thereon are in statute miles between points of departure.
NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 6. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 9th Coast Guard District in Cleveland, Ohio or at the Office of the District Engineer, Corps of Engineers in Buffalo, N.Y.
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CAUTION
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Vessels operating in fresh water lakes or rivers shall not discharge sewage, or ballast or bilge water within such areas adjacent to domestic water intakes as are designated by the Surgeon General (21 CFR 1250.93). Consult U.S. Coast Pilot 6 for important supplemental information.
Pump-out facilities
For the St. Lawrence Seaway Regulations and Circulars, special equipment, radio frequencies used in Traffic Control and related information, refer to THE SEAWAY HANDBOOK.
HOR. DATUM
The horizontal reference datum of this chart is North American Datum 1983 (NAD 83) and is considered equivalent to World Geodetic System 1984 (WGS 84) for practical plotting purposes. Positions referred to the North American 1927 Datum do not require conversion to NAD 83 for plotting on this chart.
Traffic Control calling-in point with number; arrow indicates direction of vessel movement.
POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).
LAKE ONTARIO
Low Water Datum
Average levels (1979-1987)
Extreme Levels (period of record)
Low Water Datum, which is the plane of reference for the levels shown on the above hydrograph, is also the plane of reference for the charted depths. If the lake level is above or below Low Water Datum, the existing depths are correspondingly greater or lesser than the charted depths.
WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot 6 for details.
RACING BUOYS
Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other privately maintained buoys are not all listed in the U.S. Coast Guard Light List.
CAUTION
Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged, particularly in the near shore areas. Mariners should proceed with caution.
CAUTION
Mariners are warned that numerous uncharted stakes and fishing structures, some submerged, may exist in the area of this chart. Such structures are not charted unless known to be permanent.
SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 6 for important supplemental information.
RADAR REFLECTORS
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.
CAUTION
Only marine radiobeacons have been established for surface use. Limitations on the use of certain other radio signals on aids to marine navigation can be found in the U.S. Coast Guard Light Lists and Defense Mapping Agency Publication 117.
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:
(Accurate location) (Approximate location)
LORAN-C
GENERAL EXPLANATION
LORAN-C FREQUENCY 100kHz
PULSE REPETITION INTERVAL
9960 99,600 Microseconds
STATION TYPE DESIGNATORS (Not individual station letter designators)
M Master
W Secondary
X Secondary
Y Secondary
Z Secondary
EXAMPLE 9960-Y
RATES ON THIS CHART
9960-W 9960-Y 9960-Z
The Loran-C correction tables published by the Defense Mapping Agency or others should not be used with this chart. The lines of position shown have been adjusted based on survey data. Every effort has been made to meet the 1 nautical mile accuracy criteria established by U.S. Coast Guard. Mariners, however, are cautioned not to rely solely on the lattices in inshore waters.
LAKE ERIE
Low Water Datum
Average levels (1979-1987)
Extreme Levels (period of record)
Low Water Datum, which is the plane of reference for the
Various types of nets are employed in Lake Erie of which gill nets, impounding nets and trap nets may create a hazard to mariners. These are marked by buoys or stakes. This diagram shows the areas most intensively fished and the principal type of nets employed. However, fishing gear may be encountered at any location.
1 Principal Gill Netting Areas.
2 Impounding Net Areas.
3 Trap Net Areas.
LAKE ERIE FISH NETTING AREAS
Gas pipelines and wells contain natural gas under pressure and damage to these installations would create an immediate fire hazard. Vessels anchoring in Lake Erie should do so with caution after noting the underwater, and therefore concealed, positions of all oil and gas wells, pipelines, submerged cables and other installations.
For more detail on the Welland Canal see Canadian Chart No. 2042
For more detail see Chart No. 14832
For more detail see Chart No. 14833
LORAN LINEAR INTERPOLATOR
Latitude and Longitude Plotting Interpolator
CAUTION
Improved channels shown by broken lines are subject to shoaling, particularly at the edges.
CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Notice to Mariners.
During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.
NOAA VHF-FM WEATHER BROADCASTS
The National Weather Service stations listed below provide continuous marine weather broadcasts. The range of reception is variable, but for most stations is usually 20 to 40 miles from the antenna site.
Buffalo, N.Y. KEB-98 162.55 MHz (Chan. WX-1)
FEET
YARDS
METERS
STATUTE MILES
(LORAN CHART 14823)
ONTARIO
LAKE ERIE
NIAGARA FALLS
NIAGARA FALLS
GRAND ISLAND
BUFFALO
WELLAND
PORT COLBORNE
PORT DALHOUSIE
ST CATHARINES
TUSCARORA INDIAN RESERVATION
NORTH TONAWANDA
TONAWANDA
KENMORE
CHIPPAWA
NAVY (ISLAND)
LACKAWANNA
ANCHORAGE AREA
CAUTION
This chart has been corrected from the Notice to Mariners published weekly by the Defense Mapping Agency Hydrographic/Topographic Center, the Canadian Ministry of Transport and the Local Notice to Mariners issued periodically by each U.S. Coast Guard district to the date shown in the lower left-hand corner.
SOUNDINGS IN FEET
Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
(Niagara River and Welland Canal)
SOUNDINGS IN FEET - SCALE 1:80,000
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